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Serial No. 10/692,999

Docket No. NG(ST)7617

REMARKS

Claims 1-11 are currently pending in the subject application, and are presently under consideration. Claims 1-11 are rejected. Claims 3, 8, 9, and 10 have been amended. New claims 12-19 have been added. Favorable reconsideration of the application is requested in view of the amendments and comments herein.

I. Rejection of Claims 1-3, 5, 6, 8, 9, and 11 Under 35 U.S.C. §103(a)

Claims 1-3, 5, 6, 8, 9, and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,774,591 to Black, et al. ("Black") in view of NPL document entitled: "Expert System for Automatic Analysis of Facial Expression" by Pantic ("Pantic") further in view of U.S. Patent No. 6,785,410 to Vining, et al. ("Vining"). Claims 3, 8, and 9 have been amended. Withdrawal of this rejection is respectfully requested for at least the following reasons.

Representative for Applicant respectfully submits that the combination of Black, Pantic, and Vining fails to teach or suggest claim 1. Specifically, claim 1 recites comparing the identified movements in the selected critical areas with a database that associates movements in selected critical areas with specific emotional and physical conditions. In the Office Action dated September 11, 2006 (hereinafter "Office Action"), the Examiner states that Black does not teach associating movement in critical areas with physical conditions (Office Action, page 3). As such, the Examiner relies on Pantic to teach this element of claim 1 (Office Action, page 3). Representative for Applicant respectfully submits that the addition of Pantic does not cure the deficiencies of Black to teach or suggest claim 1.

Pantic teaches recognition and emotional classification of human facial expression from a face image (Pantic, Abstract). The Examiner asserts that Pantic teaches associating movement in critical areas with physical conditions (Office Action, page 3; citing Pantic, page 881, paragraph 4, ll. 10-13). However, Representative for Applicant respectfully submits that the Examiner has mischaracterized the teachings of Pantic. Pantic teaches a system that categorizes a detected signal as a specific facial action, body action, or physiological reaction (*e.g.*, sweating) and

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provides an emotional interpretation of the detected signal to reason about the intentions of the observed person (Pantic, page 881, paragraph 4, ll. 10-17). Therefore, the system of Pantic does not associated movements in critical areas with physical conditions, as asserted by the Examiner. Instead, contrary to the Examiner's assertion, the system of Pantic associates facial expressions or physiological reactions with an emotional state of the user. Accordingly, Pantic does not teach or suggest comparing identified movements in selected critical areas with a database that associates movements in selected critical areas with specific physical conditions, as recited in claim 1.

Claim 1 also recites generating a report of the emotional and physical condition of the subject. The Examiner states that neither Black nor Pantic teach this element of claim 1, but instead relies on Vining to teach generating a report of the emotional and physical condition of the subject (Office Action, page 3). Specifically, the Examiner asserts that Vining teaches a method of reporting findings of an expert analysis of image data that includes the step of generating a report (Office Action, page 3; citing Vining, col. 2, ll. 11-12 and col. 3, ll. 37-38). Representative for Applicant respectfully disagrees, and respectfully submits that the Examiner has mischaracterized the teachings of Vining.

Vining teaches a system and method of reporting the findings of an expert's analysis of image data, and for managing a system that generates the reports, facilitates entry into a searchable database for data mining, and expedites billing and collections for the expert's services (Vining, Abstract). The teachings of Vining are thus directed to generating a report of an expert's analysis of image data. However, Vining is silent as to an expert's report regarding the emotional condition of a human subject. Therefore, Vining does not teach or suggest generating a report of the emotional condition of a human subject, as recited in claim 1. Accordingly, the addition of Vining does not cure the deficiencies of Black and Pantic to teach or suggest claim 1.

In addition, Representative for Applicant respectfully submits that there is no motivation for one of ordinary skill in the art to combine the teachings of Vining with the teachings of Black and Pantic to achieve the method of claim 1. As stated above, the teachings of Vining are

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directed to reporting the findings of an expert's analysis of image data. Because the teachings of Vining are directed to reports on an expert's findings, the teachings of Vining contradict the other elements of claim 1. Specifically, claim 1 also recites processing the image of the face of a human subject to identify movements in selected critical areas of the face and comparing the identified movements in the selected critical areas with a database that associates movements in selected critical areas with specific emotional and physical conditions. An expert, such as would provide findings in the reports in the teachings of Vining, would not process an image of the face of a human subject to identify movements in selected critical areas of the face, nor would an expert compare the identified movements in the selected critical areas with a database that associates movements in selected critical areas with specific emotional and physical conditions, as recited in claim 1. Claim 1 is thus directed to an automatic system that senses emotions in human subjects, such that analysis of an expert is unnecessary (see, *e.g.*, Present Application, paragraphs 14-17).

The Examiner asserts that "it would have been obvious for one of ordinary skill at the time the invention was made to have added the method of reporting findings of Vining to the method of recognizing facial expression of Black as modified by Pantic for creating a report from a database of expert findings so that 'data mining and other analysis may be conducted'" (Office Action, page 4). However, claim 1 is directed to a method for sensing selected emotions in a human subject, such as facial analysis for the purpose of detecting various emotions and associated physiological conditions that manifest themselves when a subject is exposed to emotion-provoking stimuli (Present Application, paragraph 26). Representative for Applicant further respectfully submits that this provided motivation, specifically the conduction of data mining and other analysis, is unrelated to the objective of claim 1, as provided in the Present Application (see, *e.g.*, Present Application, paragraphs 1-6, 10, and 26).

Therefore, Representative for Applicant respectfully submits that there is no motivation, absent improper hindsight, to combine the teachings of Vining with the teachings of Black and Pantic to achieve the method of claim 1. Accordingly, for all of the reasons described above, Black, Pantic, and Vining, individually or in combination, do not teach or suggest claim 1.

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Withdrawal of the rejection of claim 1, as well as claims 2-5 which depend therefrom, is respectfully requested.

Claim 3 depends from claim 1, and should thus be allowed for at least the reasons described above regarding claim 1. In addition, claim 3 has been amended to recite that recording frame-to-frame changes in critical areas of interest includes recording changes in at least one speckle-spot area in the critical areas of interest. Representative for Applicant respectfully submits that none of the cited references teach or suggest amended claim 3. Withdrawal of the rejection of claim 3 is respectfully requested.

Claim 6 recites a database that associates groups of facial movements with specific emotional and physical conditions of the subject, a database analysis module for comparing the identified movements in the selected critical areas with the database, and a report generator for generating a report of the emotional and physical condition of the subject. For substantially the same reasons described above regarding claim 1, Black, Pantic, and Vining, individually or in combination, do not teach or suggest claim 6. Withdrawal of the rejection of claim 6, as well as claims 7-11 which depend therefrom, is respectfully requested.

Claim 9 depends from claim 6, and should thus be allowed for at least the reasons described above regarding claim 6. In addition, claim 9 has been amended to recite that the means for recording frame-to-frame changes in critical areas of interest includes means for recording changes in at least one speckle-spot area in the critical areas of interest. Representative for Applicant respectfully submits that none of the cited references teach or suggest amended claim 9. Withdrawal of the rejection of claim 9 is respectfully requested.

For the reasons described above, claims 1-3, 5, 6, 9, and 11 should be patentable over the cited art. Accordingly, withdrawal of this rejection is respectfully requested.

II. Rejection of Claims 4 and 10 Under 35 U.S.C. §103(a)

Claims 4 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Black in view of Pantic, further in view of Vining further in view of U.S. Patent No. 7,095,901 to Lee,

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et al. ("Lee"). Claim 10 has been amended. Withdrawal of this rejection is respectfully requested for at least the following reasons.

Claim 4 depends from claim 1. As described above, Black, Pantic, and Vining, individually or in combination, do not teach or suggest claim 1, from which claim 4 depends. The addition of Lee does not cure the deficiencies of Black, Pantic, and Vining to teach or suggest claim 1. In addition, claim 4 recites that the step of recording frame-to-frame changes in critical areas of interest includes recording changes in axial distance, to facilitate detection of axial pulsing movements. The Examiner relies on Lee to teach claim 4, stating that "Lee teaches a method of obtaining iris images including the step of recording changes in axial distance (measuring the distance between a user's face and a camera) to facilitate detection of axial pulsing movements," (Office Action, page 8; citing Lee, col. 4, line 61 and col. 8, ll. 10-11). Representative for Applicant respectfully disagrees.

Lee teaches a method for adjusting a focus position in an iris recognition system (Lee, Abstract). Specifically, the system of Lee measures a distance from a camera to a user to indicate to the user if the user is within an acceptable range for iris recognition (Lee, col. 6, ll. 26-28; col. 7, ll. 38-52). Thus, Lee monitors the distance between the user and the camera to determine if the range is acceptable, and not to detect axial pulsing movements. Therefore, Lee does not teach or suggest recording changes in the axial movement to facilitate detection of axial pulsing movements, as recited in claim 4. Even assuming *arguendo* that movements of the user's head in the teachings of Lee can be considered axial pulsing movements, the movements, as taught by Lee, are of the user's entire head, and are thus not in critical areas of the face, as also recited in claim 4. Accordingly, Black, Pantic, Vining, and Lee, individually or in combination, do not teach or suggest claim 4. Withdrawal of the rejection of claim 4 is respectfully requested.

Claim 10 depends from claim 6. As described above, Black, Pantic, and Vining, individually or in combination, do not teach or suggest claim 6, from which claim 10 depends. The addition of Lee does not cure the deficiencies of Black, Pantic, and Vining to teach or suggest claim 6. In addition, for the reasons described above regarding claim 4, Lee does not teach or suggest claim 10. Therefore, Black, Pantic, Vining, and Lee, individually or in

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combination, do not teach or suggest claim 10. Withdrawal of the rejection of claim 10 is respectfully requested

III. Rejection of Claim 7 Under 35 U.S.C. §103(a)

Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Black, in view of Pantic further in view of Vining further in view of U.S. Patent No. 6,549,664 to Yamamoto ("Yamamoto"). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Claim 7 depends from claim 6. As described above, Black, Pantic, and Vining, individually or in combination, do not teach or suggest claim 6, from which claim 7 depends. The Examiner relies on Yamamoto to teach the elements of claim 7. However, the addition of Yamamoto does not cure the deficiencies of Black, Pantic, and Vining to teach or suggest claim 6, from which claim 7 depends. Therefore, Black, Pantic, Vining, and Yamamoto, individually or in combination, do not teach or suggest claim 7. Withdrawal of the rejection of claim 7 is respectfully requested.

IV. New Claims 12-19

New claims 12-19 have been added. New claims 12-15 depend from claim 1 and new claims 16-19 depend from claim 6. Thus, new claims 12-19 should be allowed for at least the reasons described above regarding claims 1 and 6, respectively. In addition, Representative for Applicant respectfully submits that none of the cited references, individually or in combination, teach or suggest the recitations of new claims 12-19. Accordingly, new claims 12-19 should be allowed over the cited art. Consideration and allowance of new claims 12-19 is respectfully requested.

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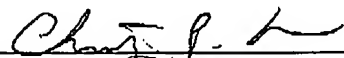
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CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that the present application is in condition for allowance. Applicant respectfully requests reconsideration of this application and that the application be passed to issue.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

Date 12-6-06

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